

What we claim is:

- 5 1: A polymeric composition of matter which contains at least 10% of at least one polyalkyl amine and one poly alcohol prepared by cross-linking with an agent which is an aldehyde or acid.

- 10 2: The composition of claim 1 which is in the form of a membrane.

- 3: The membrane of claim 2 wherein the polyalkyl amine is chosen from among polyallyl amine, polyvinyl amine, poly-4-vinyl pyridine and poly-2-vinyl pyridine.

- 15 4: The membrane of claim 2 wherein the polyalcohol is chosen from among polyvinyl alcohol, polyethylene glycol and polyallyl alcohol.

- 5: The membrane of claim 2 wherein the polyalkyl amine is an ionic derivative of the amine.
- 20 6: The membrane of claim 5 wherein the ionic group is a chloride, sulfate or nitrate.

- 7: The membrane of claim 2 which is a selectively permeable membrane.
- 25 8: The membrane of claim 2 which is on a porous support.

- 9: The membrane of claim 2 containing, additionally, silicon dioxide particles.
- 30 10: A process for removing water from a process stream using the membrane of claim 2 comprising contacting said stream with said membrane, said stream containing an organic component.

- 11: The process of claim 10 wherein the process stream is a vapor.
- 12: The process of claim 10 wherein the process stream is a liquid.
- 5 13: The composition of claim 1 which is in the form of sorbent particles.
- 14: A process of removing water from a stream containing an organic/water mixture by exposure of said mixture to the sorbent particles of claim 13.
- 10 15: A process of removing water from a stream containing an organic/water mixture comprising the steps of:
- a: loading a column with the particles of claim 13, and
 - b: passing said stream containing an organic/water mixture through said column.
- 15 16: The process of claim 15 wherein said stream is a liquid.
- 17: The process of claim 15 wherein said stream is a vapor.
- 20 18: The composition of claim 1 wherein the polyalkyl amine component is present at a concentration of at least 40% by weight.
- 19: The method of claim 18 wherein the polyalkyl amine is present at a 50% to 90%
25 concentration by weight.
- 20: The composition of claim 18 containing sorbent particles.